

Claims

What is claimed is:

1. A method for manufacturing an underwater acoustic projector comprising a plurality of cylindrical shell segments having a longitudinal slot wherein the improvement comprises the step of using multiple drivers in at least one of said shell segments.
  
2. The method defined in claim 1 including the step of manufacturing the acoustic projector using two shell segments joined in longitudinal alignment and using two drivers in each shell segment.
  
3. The method defined in claim 1 including the step of manufacturing the acoustic projector using a plurality of longitudinally joined shell segments; and using an even number of drivers in each shell segment.
  
4. The method defined in claim 1 including the step of placing a slotted metal cylindrical liner in each of the shell segments between the drivers and shell segment.
  
5. The method defined in claim 1 including the step of forming the shell segments of a dielectric material.

6. The method defined in claim 1 including the step of providing the multiple drivers with a combined longitudinal length of between 70% and 90% of the longitudinal length of the at least one shell segment.
7. An acoustic projector comprising at least one cylindrical shell segment and an even number of spaced drivers mounted within said shell segment.
8. The acoustic projector defined in claim 7 including a plurality of longitudinally joined cylindrical shell segments with an even number of spaced drivers mounted within each of said shell segments.
9. The acoustic projector defined in claim 7 wherein the shell segment is formed of an epoxy graphite material.
10. The acoustic projector defined in claim 7 wherein the combined longitudinal length of the drivers is between 70% and 90% of the longitudinal length of the shell segment.
11. The acoustic projector defined in claim 7 wherein the shell segment is formed with a longitudinal slot.
12. The acoustic projector defined in claim 11 wherein arcuate segments of material are mounted within the interior of the shell segment and extend along opposite sides of the slot.

13. The acoustic projector defined in claim 12 when the arcuate segments are formed of a dielectric material.
14. The acoustic projector defined in claim 12 wherein the drivers are arcuate shaped members and are retained in the shell segment by the arcuate shaped segments.
15. The acoustic projector defined in claim 7 including a metal liner extending longitudinal along and mounted between the interior of the shell segment and the spaced drivers and electrically insulated from the drivers to provide structural reinforcement to the projector.